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19 October 2005 Amendment
Responsive to 19 July 2005 Office Action

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IN THE CLAIMS:

1.-19. (Cancelled)

20. (Currently Amended) A reproducing apparatus for reproducing information recorded on a recording medium, comprising:

a laser light to irradiate a beam to the recording medium;

a detector to detect an optical change from the recording medium; and

an equalization circuit for executing an equalization processing to a reproducing signal generated by the optical change,

wherein the equalization circuit is arranged to operate-change an equalization coefficient during reproducing information recorded on the same recording medium.

such that the smaller an amplitude of the reproducing signal, the greater an equalization coefficient that is applied.

21. (Currently Amended) An apparatus ~~A method~~ for reproducing information according to Claim 20, wherein the greater equalization coefficient is used for a short mark, and a smaller equalization coefficient is used for a long mark.

22. (Currently Amended) An apparatus ~~A method~~ for reproducing information according to Claim 20, wherein equalization coefficient changes constantly.

23. (Canceled)

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24. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 20, comprising executing the equalization circuit includes 3-tap equalization processing, wherein each tap includes a plurality of selectable equalization coefficients.

25. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 24, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.

26. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 20, comprising executing the equalization circuit includes 5-tap equalization processing, wherein each tap includes a plurality of selectable equalization coefficients.

27. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 26, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.

28. (Currently Amended) A reproducing apparatus for reproducing information recorded on a recording medium, comprising:

- a laser light to irradiate a beam to the recording medium;
- a detector to detect an optical change from the recording medium; and
- an equalization circuit for executing an equalization processing to a reproducing signal generated by the optical change;

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wherein the equalization circuit has a plurality of amplitude regulation circuits and a plurality of delay circuits, at least one of the amplitude regulation circuits executes non-linear equalization during reproducing information recorded on the same recording medium, and the small gain is used for a long mark in non-linear equalization.

29. (Canceled)

30. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 28, comprising executing the equalization circuit includes 3-tap equalization processing, wherein each tap includes a plurality of selectable equalization coefficients.

31. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 30, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.

32. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 28, comprising executing the equalization circuit includes 5-tap equalization processing, wherein each tap includes a plurality of selectable equalization coefficients.

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33. (Previously Presented) A reproducing apparatus for reproducing information according to Claim 32, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.

34. (New) A reproducing apparatus for reproducing information recorded on a recording medium, comprising:

- a laser light to irradiate a beam to the recording medium;
- a detector to detect an optical change from the recording medium; and
- an equalization circuit for executing an equalization processing to a reproducing signal generated by the optical change,

wherein the equalization circuit is arranged to serially change an equalization coefficient throughout reproducing information recorded on the same recording medium, such that the smaller an amplitude of the reproducing signal, the greater an equalization coefficient that is applied.

35. (New) An apparatus for reproducing information according to Claim 34, wherein the greater equalization coefficient is used for a short mark, and a smaller equalization coefficient is used for a long mark.

36. (New) An apparatus for reproducing information according to Claim 34, wherein equalization coefficient changes constantly.

37. (New) A reproducing apparatus for reproducing information according to Claim 34, comprising executing the equalization circuit includes 3-tap equalization

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processing, wherein each tap includes a plurality of selectable equalization coefficients.

38. (New) A reproducing apparatus for reproducing information according to Claim 37, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.

39. (New) A reproducing apparatus for reproducing information according to Claim 34, comprising executing the equalization circuit includes 5-tap equalization processing, wherein each tap includes a plurality of selectable equalization coefficients.

40. (New) A reproducing apparatus for reproducing information according to Claim 39, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.

41. (New) A reproducing apparatus for reproducing information recorded on a recording medium, comprising:

- a laser light to irradiate a beam to the recording medium;
- a detector to detect an optical change from the recording medium; and
- an equalization circuit for executing an equalization processing to a reproducing signal generated by the optical change;

wherein the equalization circuit has a plurality of amplitude regulation circuits and a plurality of delay circuits, at least one of the amplitude regulation circuits

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executes non-linear equalization by serially changing an equalization coefficient throughout reproducing information recorded on the same recording medium, and the small gain is used for a long mark in non-linear equalization.

42. (New) A reproducing apparatus for reproducing information according to Claim 41, comprising executing the equalization circuit includes 3-tap equalization processing, wherein each tap includes a plurality of selectable equalization coefficients.

43. (New) A reproducing apparatus for reproducing information according to Claim 42, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.

44. (New) A reproducing apparatus for reproducing information according to Claim 41, comprising executing the equalization circuit includes 5-tap equalization processing, wherein each tap includes a plurality of selectable equalization coefficients.

45. (New) A reproducing apparatus for reproducing information according to Claim 44, wherein the plurality of selectable equalization coefficients of a tap are dynamically selectable during reproducing information.